

IN THE DRAWINGS

Please replace Figure 4 with the included replacement sheet. The word "PROVIDING" in block 400 was amended to read "PROVIDE" to be consistent with the verb forms in the other blocks.

REMARKS

Applicant respectfully requests reconsideration of the application in view of the remarks set forth below.

Claims 1-2, 7-10, 15-21, and 23-29 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent Publication No. 2004/0266465 (Zegelin) in view of U.S. Patent Publication No. 2004/0023621 (Sugar). Claims 3-6, 11-12, and 22 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Zegelin and Sugar in further view of U.S. Patent Publication No. 2004/0209579 (Vaidyanthan). Claims 13 and 14 were determined to be allowable if rewritten in independent form. Applicant respectfully traverses these rejections.

As the Examiner well knows, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. Moreover, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); M.P.E.P. § 2143.03.

A recent Federal Circuit case makes it crystal clear that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation

to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35.

The invention, as set forth in independent claims 1, 10, and 26 includes the general features of, among other things, receiving a plurality of signals at a first plurality of antennae, determining a portion of a transmission matrix using the plurality of received signals, and associating the portion of the transmission matrix with a predetermined location.

The Office Action asserts that the combination of Zegelin and Sugar teaches these features. Zegelin teaches a system for locating devices in a wireless network using signal strength measurements (*i.e.*, RSSI technique) or time delay (*i.e.*, TDOA technique) from a plurality of access points. Based on the signal strength or time delay measurements, range may be estimated, and location may be determined. As recognized by applicant in the Background section on p. 3, ll. 10-20, such simplistic determinations are inaccurate, especially in rich multi-path environments.

Zegelin does not use a plurality of antennae or its associated transmission matrix to determine location. Sugar and Vaidyanthan fail to correct this defect. Sugar and Vaidyanthan only teach communication between devices using multiple antenna arrays. Although both describe the use of a transmission matrix to foster such communication, neither suggests associating a portion of the transmission matrix with a predetermined location. The combination of Zegelin, which teaches determining location using signal strength or time delay, with Sugar, and Vaidyanthan, which teach only communication using an antenna array, does not equate to associating a portion of the transmission matrix with a predetermined location. Sugar and Vaidyanthan are completely silent regarding any relationship between a predetermined location

and the transmission matrix. Without such a recognition, the combination cannot be considered enabling for teaching the association of a predetermined location with a portion of the transmission matrix.

Hence, even if Zeglin and Sugar and/or Vaidyanthan are combined as suggested by the Office Action, the combination fails to teach each and every element of the claimed invention, and the rejection cannot be supported. Specifically, the combination fails to teach or suggest associating a portion of the transmission matrix with a predetermined location. Therefore, claims 1, 10, 26, and all claims depending therefrom, are allowable for at least these reasons. Applicants respectfully request the rejection of these claims be withdrawn.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4070 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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